

CLAIMS

1. An article of expanded PTFE exhibiting a fibril and node structure containing two or more distinct pore sizes distributions, one within another, wherein one pore size distribution comprises smaller pore sizes than another pore size distribution and the smaller pore size distribution is found within the larger pore size distributions, for an application as vascular graft, cardio vascular patch, cardio vascular suture, or stent cover.
2. An article as described in claim 1, wherein the smaller pore sizes are in the range of 2 to 15 microns and the pores of the larger pore size distribution are in the range of 20 to 50 microns.
3. An article as described in claim 2, wherein the smaller pore sizes are in the range of 3 to 8 microns and the pores of the larger pore size distribution are in the range from 25 to 40 microns.
4. An article as described in one of the preceding claims, wherein the smaller sizes are in the range from 4 to 6 microns and the pores for the larger pore size distribution are in the range from 25 to 35 microns.
5. An article as described in one of the preceding the claims, wherein the smaller pore sizes are around 5 microns, and the pores for the larger pore size distribution are around 30 microns.
6. An article described in one of the preceding claims, that is configured into a tube.
7. An article as described in claim 6, that is configured into a reinforced tube.
8. An article as described in one of the preceding claims, that is configured into a sheet.

9. An article described in claim 8, that is configured into a reinforced sheet.

5 10. A method for producing a vascular graft, cardio vascular patch, cardio vascular suture, or stent cover from expanded PTFE, said method comprising the steps of:

- selecting a first resin that expands to exhibit a relatively small pore size distribution,
- 10 - selecting a second resin that expands to exhibit a relatively large pore size distribution,
- mixing the first and second resins and, if any, further resins, homogeneously and blending them with a lubricant,
- forming the such obtained blend into a billet,
- extruding the billet into a tube or sheet, and
- expanding the extruded PTFE tube or sheet and heating it.

15 11. The method according to claim 10, wherein the small pore size is in the range from 2 to 15 microns and the large pore size in the range from 20 to 50 microns.

20 12. The method according to claim 10 or 11, wherein the small pore size is in the range from 3 to 8 microns and the large pore size is in the range from 25 to 40 microns.

25 13. The method according to one of the claims 10 to 12, wherein the small pore size is in the range from 4 to 6 microns and the large pore size is in the range from 25 to 35 microns.

30 14. The method according to one of the claims 10 to 13, wherein the small pore size is around 5 microns and the large pore size is around 30 microns.